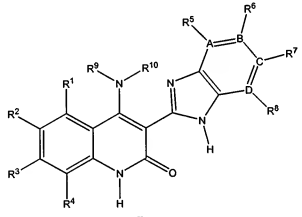
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-92. (Canceled)

93. (Currently Amended) A method of treating cancer comprising: administering to a cancer patient an effective amount of a compound of Structure I, a tautomer of the compound, a pharmaceutically acceptable salt of the compound, a pharmaceutically acceptable salt of the tautomer, or mixtures thereof, wherein the cancer is selected from hematologic cancers, ~~mast cell leukemia, germ cell tumor, small cell lung carcinoma, gastrointestinal stromal tumor,~~ acute myelogenous leukemia, ~~neuroblastoma, melanoma,~~ ovarian carcinoma, breast carcinoma, lung cancer, colon cancer, prostate cancer, pituitary cancer, chronic myelogenous leukemia, or acute lymphoblastic leukemia, and Structure I has the following formula:



I

wherein,

A, B, C, and D are all carbon or one of A or D is nitrogen, and B and C are both carbon;

R^1 is selected from the group consisting of -H, -F, -Cl, -Br, -I, substituted and unsubstituted straight and branched chain alkyl groups having from 1 to 8 carbon atoms, substituted and unsubstituted cycloalkyl groups, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, substituted and unsubstituted alkoxy groups, substituted and unsubstituted heterocyclyloxy groups, or substituted and unsubstituted heterocyclylalkoxy groups;

R^2 is selected from -H, -F, -Cl, -Br, -I, $-NO_2$, -CN, substituted and unsubstituted straight and branched chain alkyl groups having from 1 to 12 carbon atoms, substituted and unsubstituted cycloalkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted aralkyl groups, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, -OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted heterocyclylalkoxy groups, $-NH_2$, substituted and unsubstituted -N(H)(alkyl) groups, substituted and unsubstituted $-N(alkyl)_2$ groups, $-C(=O)-NH_2$, substituted and unsubstituted -C(=O)-N(H)(aryl) groups, substituted and unsubstituted -C(=O)-N(alkyl)(aryl) groups, substituted and unsubstituted $-C(=O)-N(aryl)_2$ groups, substituted and unsubstituted -C(=O)-N(H)(aralkyl) groups, substituted and unsubstituted -C(=O)-N(alkyl)(aralkyl) groups, substituted and unsubstituted $-C(=O)-N(aralkyl)_2$ groups, or $-CO_2H$;

R^3 is selected from -H, -F, -Cl, -Br, -I, -CN, substituted and unsubstituted straight or branched chain alkyl groups having from 1 to 8 carbon atoms, substituted and unsubstituted cycloalkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted aralkyl groups, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, -OH, substituted and unsubstituted alkoxy groups,

substituted and unsubstituted heterocyclyloxy groups, substituted and unsubstituted heterocyclylalkoxy groups, substituted and unsubstituted -N(H)(alkyl) groups, substituted and unsubstituted -N(alkyl)$_2$ groups, or substituted and unsubstituted -N(H)(heterocyclylalkyl) groups;

R^4 is selected from the group consisting of –H and substituted and unsubstituted alkyl groups having from 1 to 12 carbon atoms;

R^5 and R^8 are independently selected from –H, –F, –OH, or saturated heterocyclyl groups; or R^5 is absent if A is nitrogen; or R^8 is absent if D is nitrogen;

R^6 and R^7 are independently selected from -H, -F, -Cl, -Br, -I, -CN, substituted and unsubstituted straight and branched chain alkyl groups having from 1 to 8 carbon atoms, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, substituted and unsubstituted -S(=O)$_2$-N(H)(alkyl) groups, substituted and unsubstituted -S(=O)$_2$-N(alkyl)$_2$ groups, -OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted heterocyclyloxy groups, substituted and unsubstituted heterocyclylalkoxy groups, substituted and unsubstituted -N(H)(alkyl) groups, substituted and unsubstituted -N(alkyl)$_2$ groups, substituted and unsubstituted -N(H)(heterocyclyl) groups, substituted and unsubstituted -N(alkyl)(heterocyclyl) groups, substituted and unsubstituted -N(H)(heterocyclylalkyl) groups, substituted and unsubstituted -N(alkyl)(heterocyclylalkyl) groups, substituted and unsubstituted -C(=O)-heterocyclyl groups, substituted and unsubstituted -C(=O)-N(H)(alkyl) groups, substituted and unsubstituted -C(=O)-N(alkyl)$_2$ groups, substituted and unsubstituted -C(=O)-N(H)(heterocyclyl) groups, or substituted and unsubstituted -C(=O)-N(alkyl)(heterocyclyl) groups;

R^9 is selected from the group consisting of -H, substituted and unsubstituted alkyl groups having from 1 to 12 carbon atoms, substituted and unsubstituted alkenyl groups having from 1 to 12 carbons, substituted and unsubstituted aryl groups, substituted and unsubstituted aralkyl groups, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, -OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted heterocyclyloxy groups, $-NH_2$, and substituted and unsubstituted heterocyclylaminoalkyl; and

R^{10} is -H.

94. (Previously Presented) The method of claim 93, wherein R^9 is H.

95. (Previously Presented) The method of claim 93, wherein R^1 is selected from-H, –F, -Cl, substituted and unsubstituted straight or branched chain alkoxy, substituted and unsubstituted piperidinyloxy, substituted and unsubstituted morpholinyl, or substituted and unsubstituted piperazinyl.

96. (Previously Presented) The method of claim 93, wherein R^1 is –F.

97. (Previously Presented) The method of claim 93, wherein R^2 is selected from -H, -F, -Cl, -Br, -I, methyl, methoxy, or $-CO_2H$.

98. (Previously Presented) The method of claim 93, wherein R^3 is selected from -H, -F, -Cl, -Br, methoxy, and dimethylamino groups.

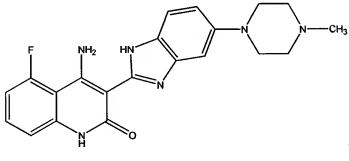
99. (Previously Presented) The method of claim 93, wherein R^4 is selected from -H or $-CH_3$.

100. (Previously Presented) The method of claim 93, wherein R^5 and R^8 are independently selected from –H, –F, –OH, or saturated heterocyclyl groups; or R^5 is absent if A is nitrogen; or R^8 is absent if D is nitrogen.

101. (Previously Presented) The method of claim 93, wherein A and D are both carbon, R^5 is –H, and R^8 is –H.

102. (Previously Presented) The method of claim 93, wherein R^6 and R^7 are independently selected from -H, -F, -Cl, -CN, substituted and unsubstituted straight and branched chain alkyl groups having from 1 to 8 carbon atoms, substituted and unsubstituted pyrrolidinyl groups, substituted and unsubstituted morpholinyl groups, substituted and unsubstituted piperazinyl groups, substituted and unsubstituted diazepinyl groups, substituted and unsubstituted triazolyl groups, substituted and unsubstituted thiomorpholine 1-oxide groups, substituted and unsubstituted pyridinylalkyl groups, substituted and unsubstituted $-S(=O)_2-N(alkyl)_2$ groups, -OH, substituted and unsubstituted straight and branched chain alkoxy groups, substituted and unsubstituted heterocyclyloxy groups, substituted and unsubstituted heterocyclylalkoxy groups, substituted and unsubstituted $-N(alkyl)_2$ groups, substituted and unsubstituted -N(H)(heterocyclyl) groups, substituted and unsubstituted -N(alkyl)(heterocyclyl) groups, substituted and unsubstituted -N(H)(heterocyclylalkyl) groups, substituted and unsubstituted $-C(=O)-N(alkyl)_2$ groups, substituted and unsubstituted -C(=O)-N(alkyl)(piperidinyl) groups, substituted and unsubstituted -C(=O)-(morpholin-4-yl) groups, or substituted and unsubstituted -C(=O)-(piperazin-1-yl) groups; or R^6 is absent if B is nitrogen; or R^7 is absent if C is nitrogen.

103. (Previously Presented) The method of claim 93, wherein the compound has the following formula:



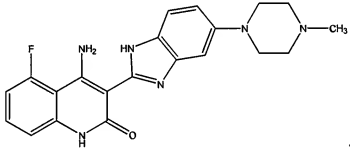
104. (Canceled)

105. (Previously Presented) The method of claim 93, wherein the cancer is acute myelogenous leukemia, ovarian carcinoma, breast carcinoma, lung cancer, colon cancer, prostate cancer, or chronic myelogenous leukemia.

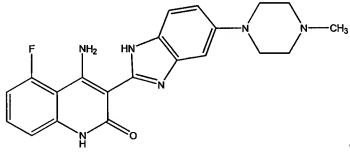
106. (Previously Presented) The method of claim 93, wherein the cancer is acute myelogenous leukemia.

107. (Canceled)

108. (Previously Presented) The method of claim 105, wherein the compound has the following formula:



109. (Previously Presented) The method of claim 106, wherein the compound has the following formula:



110. (New) The method of claim 93, wherein the cancer is acute myelogenous leukemia, ovarian carcinoma, breast carcinoma, colon cancer, or prostate cancer.

111. (New) The method of claim 103, wherein the cancer is acute myelogenous leukemia, ovarian carcinoma, breast carcinoma, colon cancer, or prostate cancer.